

unit 38) selects the auxiliary lines to be created. The wireless communication terminal 46 creates either of the auxiliary lines that are more suitable for the work machine 3 according to the type of the work machine 3 registered in advance. For example, in a case where the work machine 3 to be used is a tiller, since it is important to eliminate remaining work, the first auxiliary lines are selected and created. On the other hand, in a case where the work machine 3 to be used is a fertilizer applicator, since it is important to keep a constant work pitch even though remaining work occurs, the second auxiliary lines are selected and created.

[0084] Next, as illustrated in FIG. 12, the wireless communication terminal 46 (display control unit 33) displays the travel paths for work in the work area (the straight paths 71 and the turning paths 72) and the auxiliary lines for work in the headland area (the first reference auxiliary line 81 and the first adjacent auxiliary lines 82) on the display 31 (S303). For example, in Step S302, in a case where both first auxiliary lines and second auxiliary lines are created, the wireless communication terminal 46 displays either or both of the auxiliary lines on the display 31. Further, in a case of displaying either of the auxiliary lines, it is possible that the auxiliary line selection unit 38 selects the auxiliary lines to be displayed in the same manner as described above.

[0085] Further, the wireless communication terminal 46 (selection processing unit 39) displays a screen for asking the user in which of “work area” and “headland area” the work is to be performed and accepts the selection by the user (S303). Although there may be various display formats of this screen, for example, such a configuration in which the user is made to select an area (or a travel path or auxiliary line on an area) displayed as a figure on the display 31 as illustrated in FIG. 12 and such a configuration in which the user is made to select an item displayed with characters as “work area”, “headland area”, or the like are both possible. The user selects “work area” in a case where the work in the work area is not completed. On the other hand, the user selects “headland area” in a case where the work in the work area has already been completed.

[0086] In a case where it is determined that “work area” has been selected by the user (in a case of Yes in Step S304), the wireless communication terminal 46 executes the work in the work area (S305). Specifically, the tractor 1 (travel control unit 4a) is instructed to autonomously travel along the created travel paths (the straight paths 71 and turning paths 72). Note that, in a case where the work in the work area is performed, such a configuration in which whether a manned mode, in which the user boards the tractor 1, or an unmanned mode, in which the user does not board the tractor 1, can be further selected is also possible.

[0087] After the work in the work area is completed, the wireless communication terminal 46 (selection processing unit 39) displays a screen that allows the user to select either “work in the headland area” or “end of work” and accepts the selection by the user (S306). In a case where the user wishes to perform the work in the headland area currently, the user selects “work in the headland area”. On the other hand, in a case where the user wishes to perform the work in the headland area later or in a case where the work in the headland area itself is unnecessary, the user selects “end of work”.

[0088] In a case where it is determined that “work in the headland area” has been selected (in a case of Yes in Step S307), the wireless communication terminal 46 executes the

work in the headland area (S308). Further, in a case where the “headland area” is selected in Step S304 (that is, in a case where “work area” is not selected/in a case of No in Step S304), the wireless communication terminal 46 executes the work in the headland area as well (S308). Specifically, the tractor 1 (the travel control unit 4a) is instructed to autonomously travel along the created first auxiliary lines (the first reference auxiliary line 81 and first adjacent auxiliary lines 82) or second auxiliary lines (the second reference auxiliary line 91 and second adjacent auxiliary lines 92). For example, in Step S302, in a case where both the first auxiliary lines and the second auxiliary lines are created by the wireless communication terminal 46, it is also possible that the auxiliary line selection unit 38 selects the auxiliary lines to be used in the work in the headland area as described above. Alternatively, it is also possible that the user is allowed to select on which of the first auxiliary lines and the second auxiliary lines the work is to be performed. In this case, the auxiliary line selection unit 38 performs a process of selecting either of the auxiliary lines according to the operation by the user on the touchscreen 32, etc.

[0089] In a case where the work in the headland area is completed and in a case where “end of work” is selected in Step S307, the work in the farm field by the tractor 1 is completed (suspend).

[0090] Next, with reference to FIG. 13 and FIG. 14, an explanation is given of the display of travel paths and auxiliary lines on the wireless communication terminal 46. Note that, in the following explanation, first auxiliary lines and second auxiliary lines are collectively referred to as auxiliary lines.

[0091] As illustrated in FIG. 13, in a case where the tractor 1 is autonomously traveling along travel paths, the travel paths and the auxiliary lines are displayed so that the travel paths are more conspicuous than the auxiliary lines. Although the travel paths are made conspicuous by thickening the line width in the example illustrated in FIG. 13, it is also possible to make the colors different or make the line types (solid line, broken line, chain line) different. On the other hand, in a case where the tractor 1 is autonomously traveling along auxiliary lines, the travel paths and the auxiliary lines are displayed so that the auxiliary lines are more conspicuous than the travel paths as illustrated in FIG. 14. Note that, even in a case where the tractor 1 is not traveling, the display formats for the travel paths and the auxiliary lines can be made different. Accordingly, it is easier for the user to check the paths.

[0092] As explained above, the autonomous travel system 100 of the present embodiment includes the farm field acquisition unit 34, the reference auxiliary line creation unit 36, the adjacent auxiliary line creation unit 37, and the travel control unit 4a. The farm field acquisition unit 34 acquires information of a farm field including a work area, in which a travel path for the tractor 1 on which the work machine 3 is mounted to autonomously travel to perform work is set, and a headland area, which is formed between the work area and the farm field peripheral edge. The reference auxiliary line creation unit 36 creates the first reference auxiliary line 81 in the headland area at a position that is distant inward from the farm field peripheral edge by the first reference interval T1, which corresponds to $\frac{1}{2}$ of the work width W1 or $\frac{1}{2}$ of the work machine width W2. The adjacent auxiliary line creation unit 37 creates a first adjacent auxiliary line 82 at a position that is distant inward from the first reference